DOCUMENT RESUME

ED 266 374 CG 018 854

AUTHOR Gaudet, Linda M.; Powers, Gail M.
TITLE Differences in Coping Patterns in Parents of Chronically Ill Children.
PUB DATE Mar 86
NOTE 49p.; A research project for Master's Thesis, Arizona State University.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Coping; *Diseases; Family Income; Family Structure; Fathers; Mothers; One Parent Family; *Parent Child Relationship; Psychological Services; *Sex Differences; *Test Validity
IDENTIFIERS *Chronically Ill Persons

ABSTRACT

Little information exists on the coping patterns of parents of chronically ill children although there are 1,000,000 severely chronically ill children in the United States. To address the need for psychosocial services, Arizona is developing a program to serve its citizens. A study was conducted to examine the reliability of a major family coping instrument and the relationship between income levels and coping strategies of families experiencing pediatric illness and to compare the coping strategies of fathers and mothers and of single and dual parents. Participants included 65 parents from a peer support group for parents of chronically ill or disabled children. The Coping-Health Inventory for Parents (CHIP), a self-reporting questionnaire on family integration, strengthening self, and understanding the medical situation coping patterns was administered. A supplemental questionnaire focused on demographic information. The results revealed that mothers used the strengthening self and understanding the medical situation coping patterns more than did fathers. No significant differences were found between single and dual parents. There was no correlation between income level and coping patterns. This study found evidence of internal reliability and generalizability for the CHIP instrument. (ABL)

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Differences in Coping Patterns in Parents of Chronically Ill Children

by
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and
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A research project submitted in partial fulfillment
of the requirements for the degree
Masters of Social Work

Arizona State University
March 1986

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Abstract

A total of 107 parents (60 mothers and 45 fathers) in Southern Arizona were surveyed with the Coping Health Inventory for Parents (CHIP) in order to determine the coping patterns of parents with chronically ill children. The sample was drawn from members of Southern Arizona Pilot Parents. Comparisons were made between fathers and mothers, single and dual parents, and the Southern Arizona sample and the CHIP norms. The results indicated that mothers and fathers utilized different coping patterns, and no significant differences appeared between single and dual parents. Southern Arizona mothers differed from CHIP norms with respect to two dimensions of coping patterns. Implications for this research are discussed.

DEDICATION

To Julie Clark who, in her short life,
touched the hearts and lives
of so many
in unmeasurable terms.

ACKNOWLEDGMENTS

Our sincere appreciation goes to the following people:

To our research advisor, Dr. Rebecca Schilit, who shared with us her time, guidance, and knowledge from the conceptualization of the project through its completion.

To Dr. Stephen Powers, Legal and Research Services, Tucson Unified School District, who gently but firmly guided the project. His invaluable and consistent direction gave clarity to the research design and the technical aspects of the project, thus providing for a scholarly approach.

To Dr. Hamilton McCubbin and his staff at the Family Stress, Coping, and Health Project, University of Wisconsin-Madison for their valuable contributions in the form of resource materials and support.

To Wendy Votroubek, Director, Pediatric Home Health Care, Medical Personnel Pool, Tucson, whose expertise in the area of chronic pediatric illness proved invaluable.

To Richard Vandemark, President and the Board of Directors of Southern Arizona Pilot Parents, Tucson, whose encouragement, support, and provision of a membership list made this study possible.

To the members of Southern Arizona Pilot Parents who so willingly gave of their time to participate in this study.

To the Children's Hospice and Chronic Care Center, Tucson, for providing the impetus for the study.

To Barbara Clark and her family who translated a need into a reality in the form of the Children's Hospice and Chronic Care Center.

To our families who provided the love, patience, and support so necessary for completion of this project.

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INTRODUCTION

Problem Statement

The lack of information on coping behaviors of parents of children who are chronically ill has been problematic. McCubbin and Patterson (1981) argued that social work practitioners lack adequate information on parental coping behaviors--especially when stress is caused by chronic pediatric illness. Intervention will be improved with better knowledge of parental coping strategies.

National recognition of the need for increased knowledge in the area of chronic pediatric illness has developed as a result of the Vanderbilt Study (Hobbs & Perrin, 1985; Hobbs, Perrin, & Ireys, 1985), a project conducted over the last three years by the Center for the Study of Families and Children, Institute for Public Policy Studies, Vanderbilt University. Two findings of the study were (a) approximately 10 million children in the United States suffer from chronic illness (one million are classified as severe), and (b) a critical need exists for improved programs for this population (Perrin, 1985).

Statewide recognition of the problem has developed in Arizona during the Vanderbilt-sponsored "Arizona Conference on Children with Chronic Illness" held in November, 1985.

A crucial finding of the conference revealed that the development of psychosocial services for parents was vital. In order to address the issue of providing adequate services for this growing population, a statewide coalition was formed and is currently working toward the development of adequate services in Arizona.

Related Research

Chronic physical illness has been a major life stressor for an increasing number of children and their families (Pless & Douglas, 1971; Pless & Roghman, 1971). Twenty-five years ago most chronically ill children faced the prospect of an early death. The large majority of children with chronic illness now live well into adulthood due to developments in basic science and medical care (Hobbs & Perrin, 1985; Hobbs, Perrin, & Ireys, 1985; Shannon, 1985), producing new problems and demands and creating years of financial and emotional stress for parents. According to McCubbin and Patterson (1981), professionals serving these families need to know more about emotional and psychological family resources. Coping and family problem solving are resources which appear to have the dual role of (a) buffering the negative consequences of stressors on family life and (b) facilitating family adjustment (McCubbin & Patterson, 1981).

The general area of stress and coping research has had a long and continuous history (Coelho, Hamburg, & Adams, 1974;

Dohrenwend & Dohrenwend, 1974; Lazarus, 1966; Monat & Lazarus, 1977; Moos, 1976). Although the specific area of family stress and coping originated in landmark empirical studies (Angel, 1936; Hill, 1949; Koos, 1946), theoretical and clinical interest in family stress and coping styles is a recent phenomenon. Current studies on family stress and coping include Antonovsky (1979), Burr (1957), McCubbin & Patterson (1981), Mechanic (1974, 1979), and Pearlin & Schooler (1978).

According to Erikson (1950) and Figley (1983), family stressors may be viewed within two main categories--normative and nonnormative events. Normative events include predictable developmental changes over the life span. Nonnormative events include unanticipated situational family experiences, which usually place the family in a state of instability and call for some creative effort to cope with the situation.

Researchers have recently turned their attention to chronic nonnormative stressors. Numerous recent studies on families experiencing the nonnormative event of chronic pediatric illness have been reported by McCubbin & Patterson (1981). Chronic pediatric illness may be categorized as follows: (a) abnormal hereditary traits (e.g. cystic fibrosis), (b) chromosomal aberrations (e.g. Down's Syndrome), (c) harmful intrauterine factors (e.g. rubella), (d) perinatal trauma, including damage to the central nervous system,

and (e) serious postnatal and childhood infections (e.g. meningitis, renal disease) (McCubbin & Patterson, 1981).

Considerable interest has been documented in child and parental adjustment to the childhood illnesses of juvenile diabetes (Hamburg, 1979; Johnson, 1980), spina bifida (Nevin, 1978), cystic fibrosis (McCubbin et al., 1981; McCubbin, Patterson, McCubbin, Wilson, & Warwick, 1981; Oppenheimer & Rucker, 1980; Venters, 1979), renal disease (Klein, 1975), heart disease (Roberts, 1979), mental retardation (Holroyd, 1974; Holroyd & McArthur, 1976; Price-Bonham, 1978), brain dysfunction and cerebral palsy (Minde, 1972), hemophilia (Mattson & Agle, 1972), as well as children with potentially fatal illness (Copeland & Friedrich, 1983; Garfield, 1979; Greenham & Lohmann, 1982; Knapp & Hansen, 1973; Kubler-Ross, 1979; Ross, 1978, 1979).

Some researchers have focused on the family as a system in their examination of adjustment to childhood illness and stressed (a) the importance of including parents and siblings in all aspects of assessment and intervention and (b) the importance of considering the reciprocal relationships between the health care system, community system, and the chronically ill child (Bergman, Lewiston, & West, 1979; Caroff & Mailick, 1985; Drotar, 1981; Kaplan, Smith, Grobstein, & Fischman; Kemler, 1985).

Other researchers have recently examined innovative

and comprehensive programs to meet the complex needs of these families. Brantley, Stabler, & Whitt (1981) posited that a comprehensive program requires case consultation, laison, research, and training as integral parts of the collaboration process between medicine and psychology. They posited further there is a need for prototypical, psychosocial programs for the underserved population of chronically ill children and their families. Ross & Klar (1982) described a model program in a large pediatric cancer center which uses a mental health approach with families covering all aspects of family life. Family survival in this program was considered as important as the treatment of the disease. The most comprehensive attempt to date to address the issue of chronic pediatric illness was described by Hobbs & Perrin (1985) and Hobbs, Perrin, & Ireys (1985). Their thorough attention to problems, services, and policies was designed to guide action in developing a comprehensive system of care.

Very few publications, however, attempted to conceptualize a general practice approach to clinical social work with families suffering the illness or disability of one of its members (Minuchin, Rossman, & Baker, 1978; Sheinberg, 1983; Walker, 1983). Furthermore, it appears that a general practice approach to chronic pediatric illness has yet to be conceptualized. A critical need exists for further research in this area, as chronic pediatric illness has

unique elements which differentiate it from adult chronic illness(Anthony & Koupernik, 1973; Bergman et al., 1979; Bluebond-Langor, 1978; McCollum, 1984; Travis, 1976; Tuma, 1982).

A small number of studies on chronic pediatric illness have attempted to answer why some families are better able to adjust to and manage chronic stressors than others. Kaplan et al. (1973) posited the role of the family was vital and could make the difference between effective coping and ineffective coping. Caroff & Mailick (1985) agreed the family was vital when considering effective coping, but went further to establish a differential treatment paradigm to assess the level of family functioning. Other attempts at measuring effective coping with chronic pediatric illness have been recorded by Hollingsworth (1983), Holroyd (1974), McCubbin, Comeau, & Harkins (1979), and McCubbin, McCubbin, Nevin, & Cauble (1979).

McCubbin & Patterson (1981) noted that recent research has focused on delineating and measuring family resources, clarifying the active process of coping, and describing families' social transactions. These areas of investigation offer significant avenues for further research, as well as suggestions for prevention-oriented and/or therapeautic interventions. According to McCubbin & Patterson (1981), as the emphasis shifts from the study of family dysfunction to the definition and measurement of positive family-oriented

coping, it will be necessary to learn which patterns work or fail, under what conditions, and in what kind of families.

The coping process has been conceptualized in the form of the Double ABCX Model (McCubbin & Patterson, 1981). This model was built upon the ABCX Family Crisis Model advanced by Hill (1949, 1958). Hill described a simple four variable causal model which posited that when a stressful event occurs (A), the family draws on its resources (B), and its members have a perception of the event (C), each of which interact and result in stress. The stress may become a crisis (X) if the family is unable to use existing resources and to define the situation adequately.

McCubbin & Patterson (1981) advanced their own ABCX Model to account for family post-crisis behavior. They postulated there is often a pileup of life stressors (A), and that coping involves existing and new resources (B) in conjunction with the perception of the crisis (C). The result is an adaptation (X), which may be a bonadaptation or a maladaptation. McCubbin and Patterson, combining their post-crisis ABCX Model with Hill's pre-crisis ABCX Model, called the full model the Double ABCX Model (See figure 1).

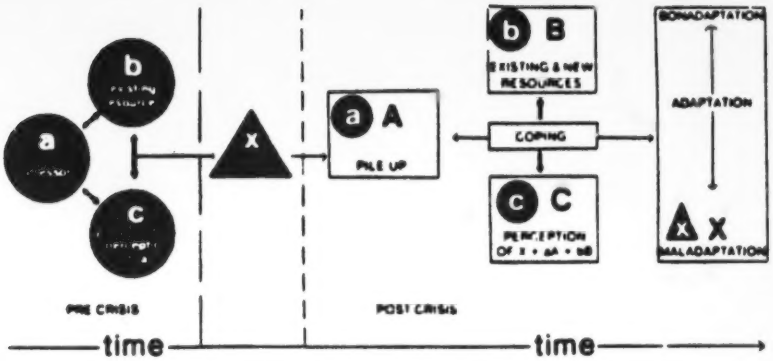

Figure 1. The double ABCX model.

Purpose of Study

The general purpose of this study was to acquire more knowledge about the parental coping stategies necessary for the development of successful intervention programs for families with chronic pediatric illness. Specifically this study (a) examined the reliability of a major family coping instrument, (b) examined the relationship between income levels and coping strategies of families experiencing chronic pediatric illness, (c) compared the coping stategies of fathers and mothers of chronically ill children, and (d) compared the coping strategies of single and dual parents of chronically ill children.

One major use of this study will be to provide information vital to program development for the Children's Hospice and Chronic Care Center, a recently organized Tucson-based group dedicated to servicing the needs of terminally and chronically ill children and their families.

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METHOD

Sample

The population for this study consisted of 210 families belonging to Southern Arizona Pilot Parents, a peer support group for parents of children with chronic physical illness and/or developmental disabilities. Permission was obtained from the Board of Directors of this organization to use the membership list in January of 1986. Of the original 210 families comprising the membership list, 55 were undeliverable by the postal service. Of the remaining 155, 65 (42%) responded and comprised the sample. The nondelivered surveys were not included in determination of the 42% response rate.

Of the participating households, 107 individuals responded. Sixty (57%) of the parents were mothers and 45 (43%) were fathers (two did not indicate their sex). Fifty-five were dual parent families, and 10 were single-parent families. The mean age for parents in these families was 35.8 years for mothers and 37.8 years for fathers. Mothers had completed a mean of 13.4 years of education, and the fathers, 14.5. The median income range for these families was $20,000-$35,000 per year. The majority of the families were Anglo (64%), with the remainder being Spanish heritage (19%), Native American (8%), other (5%), Asian (3%) and Black (1%) (See Table 1).

Instrumentation

Two instruments were utilized in this study: the Coping-Health Inventory for Parents (CHIP) (McCubbin, McCubbin, Nevin, & Cauble, 1979b) and a supplemental questionnaire. The CHIP consists of 45 self-report items. Each item is a different coping behavior. Items are grouped into three subscales: (1) Maintaining Family Integration (Coping Pattern I), (2) Strengthening Self (Coping Pattern II), and (3) Understanding the Medical Situation (Coping Pattern III). Each parent indicated how helpful each coping behavior had been in managing the chronic home illness situation. Helpfulness was rated on a scale of 0 (Not helpful) to 3 (Extremely Helpful). If a coping behavior had never been used, the parent recorded either (a) "I do not cope this way because I/we chose not to use it"; or (b) "Coping behavior is not possible in our family, not applicable to us" (See Appendix A for a copy of the CHIP).

The reliability and validity of the instrument has been examined by McCubbin and Patterson (1981) who considered the instrument to be adequate. By means of a factor analysis they provided evidence of the factorial validity of the instrument. Cronbach's alpha (internal consistency reliability) for each subscale is: Coping Pattern I, .79; Coping Pattern II, .79; and Coping Pattern III, .71. McCubbin and Patterson (1981) also reported that the subscales of the CHIP correlated moderately with the Family Environment Scale (Moos, 1976), which purportedly measured a similar

construct.

The Supplemental Questionnaire was designed to collect the demographic data needed for the survey. Each parent indicated his/her sex, age, ethnic background, annual family income, parental status (single or dual), and the highest educational level achieved (Refer to Appendix B for a copy of the Supplemental Questionnaire).

The CHIP and the Supplemental Questionnaire were administered to five parents and five human service professionals as a pilot test of the two instruments. Each of the ten pilot test participants submitted critiques and comments about the instruments and the procedures. Minor modifications were made to the Supplemental Questionnaire based on the feedback received.

Research Design

Seven independent variables were included in this study: (1) sex, (2) age, (3) educational level, (4) ethnicity, (5) parental status (single/dual), (6) income level, and (7) geographic location. It was assumed that the respondents would give the correct answers for the first six variables; geographic location was operationally defined as the Southern Arizona (counties south of Maricopa) group and the Midwest, or normative group (McCubbin and Patterson, 1981).

Three dependent variables were included in this study: (1) maintaining family integration as measured by the Coping Pattern I subscale of the CHIP: (2) strengthening self as measured by the Coping Pattern II subscale of the CHIP: and

(3) understanding the medical situation as measured by the Coping Pattern III subscale of the CHIP.

Procedure

The survey was conducted during January, 1986, at which time the cover letter describing the purpose of the survey, the supplemental instrument, and the CHIP were mailed to members of Southern Arizona Pilot Parents (See Appendix C for a copy of the cover letter). A follow-up mailing was carried out approximately two weeks after the initial mailing.

Responses from the CHIP and the Supplemental Questionnaire were coded and analyzed with the Statistical Package for the Social Sciences (SPSS) (Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975) at the University of Arizona Computer Center.

Research Questions

This study addressed five major research questions:

Q_1: Is there a difference between the three coping patterns (maintaining family integration, strengthening self, and understanding the medical situation) of Southern Arizona parents of chronically ill children and a normative group of parents (McCubbin & Patterson, 1981) of chronically ill children?

Q_2: What are the Cronbach alpha internal consistency reliabilities of the three subscales of the CHIP as computed from Southern Arizona parents of chronically ill children, and do they differ from the reliabilities of a normative group of parents (McCubbin & Patterson, 1981)?

Q_3: Is there a difference between coping patterns (maintaining family integration, strengthening self, and understanding the medical situation) of male and female parental figures of chronically ill children in Southern Arizona?

Q_4: Is there a difference between coping patterns (maintaining family integration, strengthening self, and understanding the medical situation) of single and dual parental figures of chronically ill children in Southern Arizona?

Q_5: Is there a correlation between income levels and coping patterns (maintaining family integration, strengthening self, and understanding the medical situation) among Southern Arizona parents of chronically ill children?

Research questions 1, 3, and 4 were examined with independent t tests. Groups compared in these research questions were Southern Arizona Parents versus a Midwest normative group, female versus male parental figures, and single versus dual parental figures. The three coping subscales of the CHIP served as the dependent measures in research questions 1-4. The alpha level was set at the conventional .05 level. Research question 4 specified a comparison between single and dual parents. To control for gender, an additional comparison was made between <u>women</u> single parents and <u>women</u> dual parents, excluding men from the analysis.

Research question 2 specified that reliability coefficients of a normative group of parents would be compared with the reliability coefficients of the same scales obtained from Southern Arizona parents of chronically ill children. Reynolds (1982) describes an F test of the equality of two independent alpha reliability coefficients. The formula for this comparison is

$$F = \frac{1 - \text{alpha}_1}{1 - \text{alpha}_2}$$

where alpha_1 is the smaller of two alpha reliability coefficients. This ratio is distributed as F with n_1 and n_2 degrees of freedom.

Research question 5 was investigated with Pearson product moment correlations. The three correlations were between income level and maintaining family integration, income level and strengthening self, and income level and understanding the medical situation. Each correlation was tested for significance at the .05 level.

Results

Research Question 1 stated "Is there a difference between the three coping patterns (maintaining family integration, strengthening self, and understanding the medical situation) of Southern Arizona parents of chronically ill children and a normative group of parents of chronically ill children?". The focus of this first research question was to compare the mean responses of the mothers of the norm group with the mothers of the Southern Arizona group, and the fathers of the norm group with the fathers of the Southern Arizona group. These comparisons of the three subscales of the CHIP (maintaining family integration, strengthening self, and understanding the medical situation) will help to determine the generalizability of the CHIP norms to the Southwest.

Southern Arizona mothers differed from their respective norms on two subscales of the CHIP. On the first subscale (maintaining family integration), Southern Arizona mothers did not significantly differ from the CHIP norms $t(216) = .86$, $p < .740$. Southern Arizona mothers, however, were found to differ significantly from the CHIP norms on Subscale II (strengthening self) $t(216) = 2.55$, $p < .011$. The mean of the Southern Arizona mothers ($M = 32.31$) on Subscale II was higher than that of the CHIP norms ($M = 28.00$). Southern Arizona mothers were found also to differ significantly from

the CHIP norms on Subscale III (understanding the medical situation) $t(216) = 2.36$, $p < .018$. The mean of the Southern Arizona mothers on Subscale III was 17.27 as compared with the CHIP mean of 15.00. It appeared that Southern Arizona mothers utilized strengthening self and understanding the medical situation significantly more than did the normative group of mothers (See Table 2).

Southern Arizona fathers, however, did not differ significantly from their respective norms on any of the three subscales of the CHIP. It appeared that fathers in both the Southern Arizona and the normative group utilized similar coping patterns in dealing with their child(ren)'s chronic illness and did not differ significantly from each other (For a full presentation of the father's means and standard deviations, see Table 2).

Research Question 2 stated "What are the Cronbach alpha internal consistency reliabilities of the three subscales of the CHIP as computed from Southern Arizona parents of chronically ill children, and do they differ from the reliabilities of a normative group of parents?". The reliabilities of Subscale I (Maintaining Family Integration), Subscale II (Strengthening Self) and Subscale III (Understanding the Medical Situation) were .85, .85, .81 respectively. These reliabilities appeared to be rather high for these subscales. Certainly, these reliabilities should be considered adequate.

The reliability coefficients calculated from subscales I, II, and III from the Southern Arizona sample (.85, .85, .81) were compared with the reliability coefficients reported by McCubbin and Patterson (1981) for their normative group (.79, .79, and .71). The reliabilities of the Southern Arizona sample of parents were significantly higher than their corresponding norm group for Subscale I, $F(184, 106) = 1.40$, $p < .029$; for Subscale II, $F(184, 106) = 1.75$, $p < .001$; and for Subscale III, $F(184, 106) = 1.53$, $p < .008$. This suggests that the reliabilities of the Southern Arizona sample were consistently higher than those reliabilities obtained from the CHIP norm (See Table 3).

Research Question 3 stated "Is there a difference between coping patterns (maintaining family integration, strengthening self, and understanding the medical situation) of male and female parental figures of chronically ill children in Southern Arizona?". Fathers and mothers of the Southern Arizona sample were compared on each subscale of the CHIP to determine if there were differences in their mean coping patterns. Mother's coping patterns on Subscale I (Maintaining Family Integration) ($M = 39.14$) $t(103) = 1.61$, $p < .111$. The mothers mean score on Subscale II (Strengthening Self) ($M = 32.31$) was significantly higher than that of the fathers ($M = 28.17$) $t(103) = 2.30$ $p < .023$. The mother's mean score on Subscale III (Understanding the Medical Situation) ($M = 17.27$)

was substantially higher than that of the fathers (M = 13.97), and it was statistically significant $t(103) = 3.61$ $p < .001$.

Research Question 4 stated "Is there a difference between coping patterns (maintaining family integration, strengthening self, and understanding the medical situation) of single and dual parental figures of chronically ill children in Southern Arizona?". Single and dual parents were compared on Subscale I, II, and III of the CHIP to determine if there were significant differences between the coping patterns of single parents and dual parents.

Since mothers are primarily single parents, and approximately one-half of the dual parents in the study were fathers, it was important to control for this potentially confounding variable (disproportionate sex representation in the sample). Therefore, differences between single and dual mothers were examined on Subscales I, II, and III. Results of these analyses indicated there were no significant differences between single mothers and mothers in dual parent families.

Research Question 5 stated "Is there a correlation between income levels and coping patterns (maintaining family integration, strengthening self, and understanding the medical situation) among Southern Arizona parents of chronically ill children?" Subscales I, II, and III of the CHIP were correlated with income levels reported by the Southern Arizona sample. No statistical significance was

found, however, between the subscales and income level (See Table 6).

Discussion

Discussion of Findings

Findings of research question one indicate that Southern Arizona mothers differed significantly from the normative group of mothers on coping patterns II (strengthening self) and III (understanding the medical situation). Southern Arizona fathers, however, did not differ significantly from the normative group of fathers on any of the three coping patterns (maintaining family integration, strengthening self, and understanding the medical situation). It appears, therefore, that the norms for the mothers cannot be generalized to Southern Arizona, whereas the norms for the fathers can be. From a clinical perspective, however, it is also important to look at the parents of chronically ill children from a generic point of view. Results show this population seems to utilize the same types of coping patterns; however, the degree to which they use them varies, according to factors such as geographic location and diagnostic specificity.

Results for research question two show that the reliabilities of the Southern Arizona sample differ from the reliabilities of the normative group. The reliabilities of this study were significantly higher than their corresponding normative group for all three coping patterns. This finding suggests that the internal consistency reliability of the CHIP

may be even greater than McCubbin and Patterson (1981) reported.

Findings of research question three indicate that Southern Arizona mothers found coping patterns II and III to be significantly more useful than did Southern Arizona fathers. These results appear to be consistent with the findings of McCubbin et al. (1983) and lead to the tentative conclusion that generally mothers utilize these two coping patterns more than do fathers.

Results of research question four indicate no significant differences between single and dual parents' use of the three coping patterns. Although the proportion of single parent families in this study is consistent with that of the 1980 Arizona Census (U. S. Department of Commerce, 1980) and the study of McCubbin et al. (1983), the sample size was statistically too small (n=10) to draw any conclusions about this population. With a larger sample more differences may have been found.

Findings of research question five show no significant correlations between income level and the three coping patterns. Although this question appears not to have been addressed in previous research, examination of the question has been recommended by researchers, clinicians, and families with chronically ill children. Based on this input, this question was examined to determine whether interventions would need to differ according to income level. While it was expected that

a correlation would be found between income level and the three coping patterns, one possible explanation for the absence of such a correlation is that coping strategies may transcend all socioeconomic levels. This finding suggests that supportive interventions (i.e., counseling) need not vary according to income level.

In light of the theoretical framework discussed in the introducation, findings of this study contribute to the stress and coping knowledge base as conceptualized in McCubbin and Patterson's (1981) Double ABCX Model. This model provides the means for a preventative versus a retrospective approach to intervention. This study, therefore, provides further data necessary to develop prevention-oriented interventions. Moreover, the study provides further evidence of the internal reliability and generalizability of a major coping instrument (CHIP), which appears to be useful both as a counseling tool and as a measure of successful intervention by means of a pre-test and post-test methodology.

Limitations

Limitations of this study are of two kinds: internal validity and external validity. An internal validity limitation in this study is the inadequate sample size of the single parent population mentioned in the previous discussion of findings, resulting in an inability to draw any conclusions regarding this population.

Of the external validity limitations, the first concerned the response rate. Although the sample size of 107 respondents

for 65 families is adequate, the percentage of the population responding is moderately low. Thus, the degree to which one can draw inferences from the sample may be limited. The second external validity limitation concerns the inability to obtain a random sample because of the small number of subjects available. The absence of such a sample may limit confidence in the statistical results. Any kind of sample, however, is difficult to obtain because hospital in-patient and out-patient clinic populations are not available, due to legal issues involving confidentiality and the use of human subjects in research design. It is, therefore, fortunate that the membership list of Southern Arizona Pilot Parents was made available for this study.

Implications

It appears that there are three major implications based on the findings of this study. The differences in coping patterns found between the Southern Arizona mothers and the normative group of mothers may have important implications for the development of appropriate interventions and program design in relationship to the ethnic distribution of Southern Arizona. The relatively high percentage rate (19%) of Mexican Americans found in this study compared to the percentage rate (1%) provided by the initiative normative date (McCubbin, et al., 1983) could account for the coping differences found between the Southern Arizona group and the normative group of mothers. The purported characteristic of inner strength

ascribed to the Mexican American woman could explain the greater use of coping patterns II (strengthening self) and III (understanding the medical situation) by the Southern Arizona group of mothers. Of the research conducted to date (McCubbin et al., 1983; McCubbin, 1985), little if any reference is made to the Mexican American population. It is questionable, therefore, whether coping patterns II and III of the CHIP can be generalized to Southern Arizona mothers. Thus, a) intervention programs must be culturally sensitive in design, and b) clinicians must be aware of ethnic differences when utilizing intervention tools such as the CHIP.

The second implication concerns the finding that the internal consistency reliabilities of the Southern Arizona sample were consistently higher than those reliabilities obtained from the initiative CHIP norms. When working with individuals in a clinical setting, it is important to have an intervention tool with high reliability. The findings provide further evidence to allow for the clinician's confident utilization of the CHIP as an assessment tool with individuals in a clinical setting.

The final implication is related to the finding that the Southern Arizona mothers' utilization of coping patterns II and III was substantially higher than that of Southern Arizona fathers. These differences were even higher than that reported by McCubbin and Patterson (1981). The findings of both studies would suggest that mothers and fathers must be

equally considered in the development and implementation of interventions, whereas the present emphasis appears to be on the mother as the primary caretaker. The intervention focus on the male parental figure should be directed toward assisting him to move beyond societal expectations restricted to a) provision of material resources, b) control of the situation, and c) control of the expression of emotion in himself and his family members. The new focus would then include a reeducation directed toward moving beyond the need for maintaining control to a possible vulnerability and the need for support by others. Conceivably, the father and mother could then support one another in their mutual use of the coping patterns. It is further speculated that it is possible that the ethnicity factor previously mentioned in relation to the generalizability of the CHIP norms could be an even greater factor with regard to the ascribed societal expectations of provision and control for the Mexican American male parental figure.

Recommendations for Future Research

Future research can be categorized into associational research and comparative research. It is suggested that the most critical focus for associational research should be on the relationship between parental coping patterns and stages of chronic pediatric illness. Coping patterns appear to change as stages of illness progress, and a dynamic rather than a static view should be taken when focusing on these patterns. An efficient and effective intervention program requires

stage-specific knowledge and methodology.

Recommendations for future comparative studies may be conceptualized in terms of studies a) not previously attempted, and b) requiring replication. The study of coping patterns of parents with children experiencing different categories of chronic illness (physical, developmental, and emotional) has not been attempted and would appear to be of value to the clinician. The studies considered requiring replication are those comparing coping patterns of parents of differing parental status, levels of income, geographic location (variables addressed in this study), and the additional variables of ethnicity, age, and income.

Each of these recommendations is considered important in assisting the practitioner to develop and deliver a comprehensive program of support for the chronically ill child and his family. This study and a growing number of similar studies are an attempt to address the need for discovering ways to assist these families.

The Family Stress, Coping, and Health Project at the University of Wisconsin-Madison has been recording results of studies using the CHIP since 1981 and will provide results to interested clinicians or those interested in pursuing further research (McCubbin, 1985). This systematic collection of data is vital to furthering research in parental coping and chronic pediatric illness.

Conclusion

When a child becomes chronically ill, it is not just a pediatric problem; it is a family problem. Health care professionals and social work practitioners alike require an ecological, systems perspective in order to provide an optimal level of clinical intervention. The family, as it interacts with many other systems, thus becomes the focus of intervention.

The Coping Health Inventory for Parents (CHIP) (McCubbin et al., 1979b) was developed to provide a valid and reliable measure of parental coping. Knowledge of the level of parental coping is critical for the clinician to assess the impact on the ill child and his family as a unit. This knowledge is also critical in assisting the child and family in successful interaction with and adaptation to various medical, school, and community systems. The coping behaviors and coping patterns assessed by the CHIP appear to provide the necessary systems framework for a family based intervention program. The CHIP can provide the means for assisting parents to examine the need to balance the demands of caring for the ill child with their need to: a) invest in themselves as individuals, b) attend to the family unit, and c) understand the medical situation.

This study has served an important function in supporting the reliability of the CHIP in its use as a clinical tool. In addition, the study has found significant differences in the coping strategies among the Southern Arizona group of mothers

and the normative group of mothers and between mothers and fathers in the Southern Arizona group. These findings are expected to increase the effective utilization of the CHIP within clinical settings and thereby benefit families experiencing chronic pediatric illness.

Table 1

Demographic Characteristics of Sample of Southern Arizona Pilot Parents, January, 1986

Variables	Southern Arizona n	Percent
Sex		
Mothers	60	57%
Fathers	45	43%
Total	105	100%
Ethnicity		
Anglo	69	64%
Native American	9	8%
Black	1	1%
Spanish Heritage	20	19%
Asian	3	3%
Other	5	5%
Total	107	100%
Parental Status		
Single	55	85%
Dual	10	15%
Total	65	100%

Note. Total response was 107 individuals in 65 families. Because respondents failed to answer some demographic questions, the totals for each variable may vary.

Table 2

Comparison of Coping Patterns of Southern Arizona Sample and the CHIP Norms

Coping Pattern	CHIP N	CHIP M	CHIP SD	S. Arizona N	S. Arizona M	S. Arizona SD	t[a]	p
Mothers								
I	158	40.00	15.00	60	41.75	7.89	.86	.740
II	158	28.00	12.00	60	32.31	8.55	2.55	.011
III	158	15.00	7.00	60	17.27	4.01	2.36	.018
Fathers								
I	150	36.00	20.00	45	39.14	8.66	1.02	.310
II	150	25.00	15.00	45	28.17	9.83	1.33	.182
III	150	12.00	8.00	45	13.97	5.37	1.55	.119

Note. Coping Pattern I of the CHIP is Maintaining Family Integration; Coping Pattern II of the CHIP is Strengthening Self; and Coping Pattern III of the CHIP is Understanding the Medical Situation.

[a]Degrees of freedom for t test are 216.

Table 3

Comparison of Cronbach's Alpha Reliabilities of the Southern Arizona Sample and the CHIP Norms

Coping Patterns	Reliabilities CHIP	Reliabilities S. Arizona	F[a]	p
I	.79	.85	1.40	.029
II	.79	.85	1.75	.001
III	.71	.81	1.53	.008

Note. I = Maintaining Family Integration; II = Strengthening Self; II = Understanding the Medical Situation.

[a]df = 184, 106.

Table 4

Comparison of Coping Patterns of Fathers and Mothers of the Southern Arizona Sample

Coping Patterns	Fathers N	Fathers M	Fathers SD	Mothers N	Mothers M	Mothers SD	t	p
I	45	39.14	8.66	60	41.75	7.89	1.61	.111
II	45	28.17	9.83	60	32.31	8.55	2.30	.023
III	45	13.07	3.37	60	17.27	1.01	3.61	.001

Note. Coping Pattern I of the CHIP is Maintaining Family Integration. Coping Pattern II of the CHIP is Strengthening Self; and Coping Pattern III of the CHIP is Understanding the Medical Situation.

Table 5

Comparison of Coping Patterns of Single and Dual Parental Figures of the Southern Arizona Sample

Coping Patterns	Single N	Single M	Single SD	Dual N	Dual M	Dual SD	t	p
All Parents								
I	10	41.45	5.30	97	40.75	8.60	.25	.802
II	10	35.90	6.83	97	30.27	9.51	1.82	.071
III	10	17.75	3.88	97	15.74	4.96	1.24	.216
Mothers Only								
I	8	42.00	5.51	52	41.71	8.24	.10	.924
II	8	36.13	7.43	52	31.72	8.63	1.37	.177
III	8	18.50	2.22	52	17.08	4.20	.93	.355

Note. Coping Pattern I of the CHIP is Maintaining Family Integration; Coping Pattern II of the CHIP is Strengthening Self; and Coping Pattern III of the CHIP is Understanding the Medical Situation.

Table 6

Correlation between Subscales I, II, III and Income of the Southern Arizona Sample

Variables	Income
Subscale I	-.04
Subscale II	-.13
Subscale III	-.03

Note. Subscale I = Maintaining Family Integration; Subscale II = Strengthening Self; and Subscale III = Understanding the Medical Situation.

FAMILY STRESS COPING AND HEALTH PROJECT
1300 Linden Drive
University of Wisconsin-Madison
Madison, WI 53706

CHIP

FORM D
1983
H. McCubbin

COPING-HEALTH INVENTORY FOR PARENTS

Family Health Program

Hamilton I. McCubbin Marilyn A. McCubbin Robert S. Nevin Elizabeth Cauble

PURPOSE

CHIP – The Coping-Health Inventory for Parents was developed to record what parents find helpful or not helpful to them in the management of family life when one or more of its members is ill for a brief period *or* has a medical condition which call for continued medical care. Coping is defined as personal or collective (with other individuals, programs) efforts to manage the hardships associated with health problems in the family.

DIRECTIONS

- To complete this inventory you are asked to read the list of "Coping behaviors" below, one at a time.
- For each coping behavior you used, please record how helpful it was.

  HOW HELPFUL was this COPING BEHAVIOR to you and/or your family: Circle ONE number

  3 = *Extremely* Helpful
  2 = *Moderately* Helpful
  1 = *Minimally* Helpful
  0 = *Not* Helpful
- For each Coping Behavior you did *Not* use please record your "Reason."

  Please RECORD this by *Checking* ☑ *one* of the reasons:

  Chose not to use it ☐ or Not Possible ☐

PLEASE BEGIN: Please read and record your decision for EACH and EVERY Coping Behavior listed below.

COMPUTER CODES: IID ☐☐☐☐ GID ☐☐☐ FAMID ☐☐☐☐

APPENDIX B

Supplemental Questionnaire

DIRECTIONS: Please circle the appropriate numbers. Thank you.

1. Sex: (1) Female (2) Male

2. Age: _____

3. Ethnic Background: (1) Anglo (2) Native American
   (3) Black (4) Asian (5) Spanish Heritage (6) Other

4. Annual Family Income: (1) 0 - $9,999 (2) $10,000 - $19,999
   (3) $20,000 - $34,999 (4) over $34,999

5. Are you a single parent? (1) Yes (2) No

6. Highest grade level completed: ____ Other _____

   If other, please explain: _____

   _____

Children's Hospice and Chronic Care Center

January 3, 1986

Dear Parent,

We are conducting a research study that is designed to collect further information on the ways families cope with chronic pediatric illness. The results of this study will assist in program development for the Children's Hospice and Chronic Care Center in Tucson. This is a new organization devoted to providing information, services, and support to families such as yours.

We have received your name from Pilot Parents and would appreciate your cooperation with the following:

1. Complete the Coping-Health Inventory (CHIP) and the attached supplemental questionnaire (please do not separate). If there are two parents in the home, we request that each parent fill out a separate set of forms.

2. Return the forms in the enclosed self addressed, stamped envelope no later than January 13, 1986.

We suggest setting aside a few quiet moments for completion of the forms. All information will be kept strictly confidential. Your contribution to this study will positively affect many chronically ill children and their families. Your efforts will therefore be greatly appreciated.

The results of the study will be available after September 1, 1986. For study results or questions regarding completion of the questionnaires, please call 323-0162. Thank you in advance for your cooperation.

Sincerely,

Linda Gaudet

Linda Gaudet

Gail Powers

Gail Powers

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